

# Contact Investigations: Finding TB Cases/Suspects

WHO ?

WHERE ?

WHEN ?

WHY ?

HOW ?



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Prevention

TB Control



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# WHO ?

Is Responsible For  
Contact Investigation?

# YOU ARE!




# Role Of Health Department

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To ensure that all persons who are suspected of having tuberculosis are identified and evaluated promptly and that an appropriate course of treatment is prescribed and completed successfully

MMWR TREATMENT OF TB pg.15

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- Health departments are responsible for ensuring contact investigations

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  - Public health officials must decide which
    - Contact investigations should be assigned a higher priority
    - Contacts to evaluation first
  - Decision to investigate an index patient depends on presence of factors used to predict likelihood of transmission



# WHY?

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- Identify Tb Exposure
- Identify Transmission
- Prevent Disease



# Purpose of Contact Investigation

- Identify, evaluate and treat individuals who may have been infected with TB by a person with active, infectious TB
- Detect additional cases of active TB
- Identify and treat contacts with LTBI to prevent TB disease




# Virginia's Standard Of Care

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TB CASES/TB SUSPECTS - the initial interview will be conducted within 3 days

At least 90% of newly reported AFB smear + cases will have contacts identified and at least 95% of the contacts will be evaluated for disease and/or infection



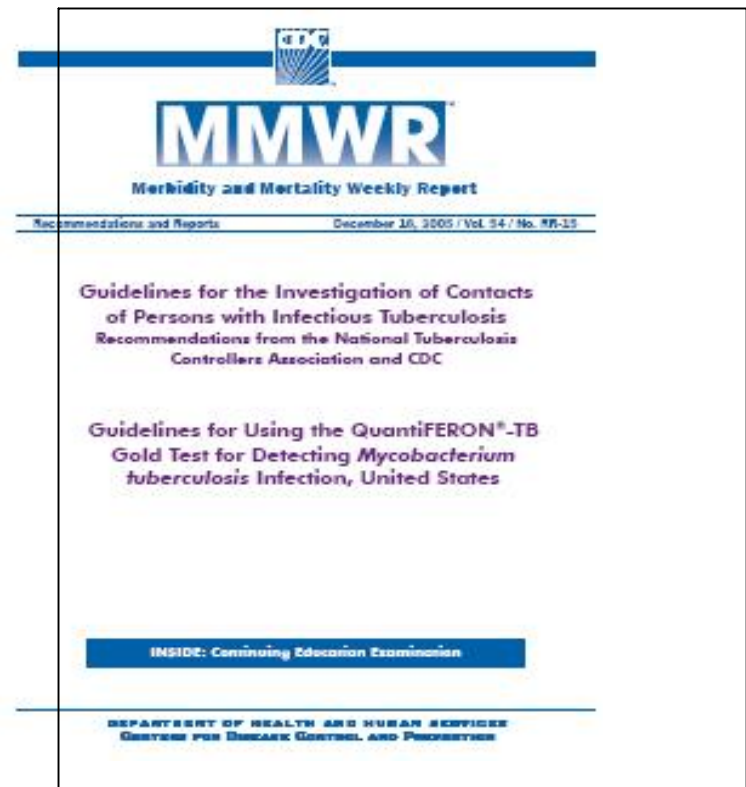
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Contact investigation will be initiated within 3 days of the first notification and completed within three months

85% of contacts found to be infected with Mtb infection will complete a full course of recommended treatment

# Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis 2005

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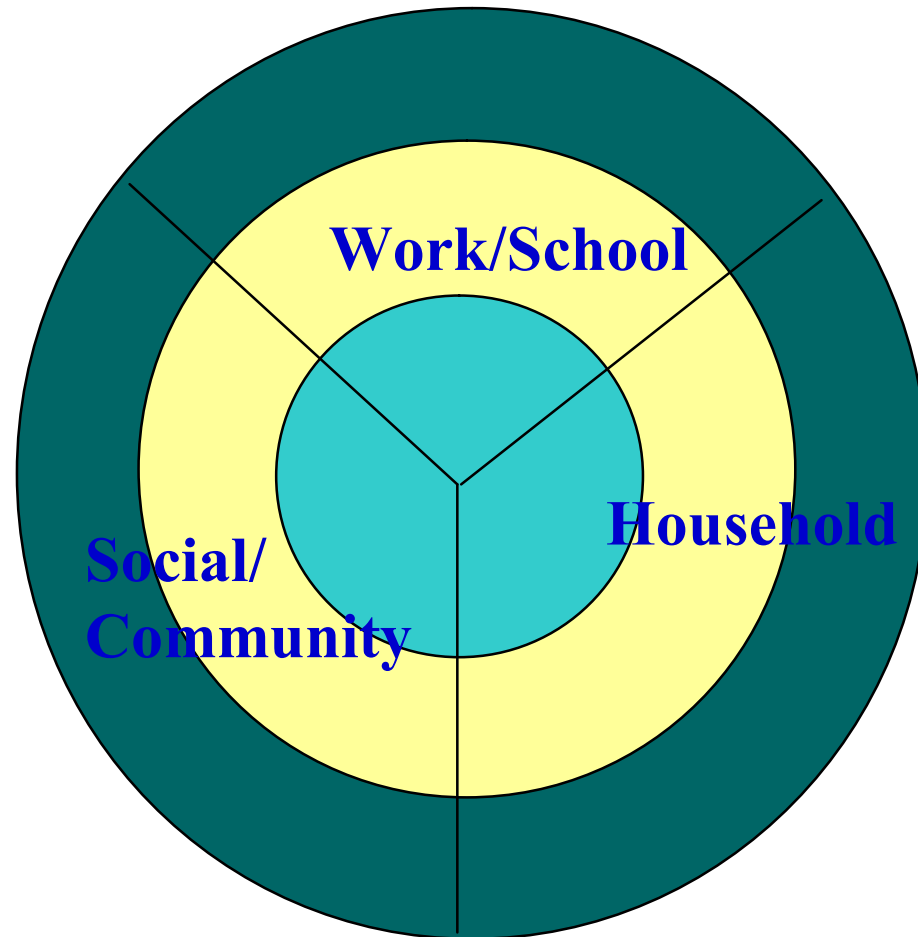
# **Probability of TB Transmission**

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- Transmission dependent on three factors
  - Infectiousness of the person with TB
  - Environment in which the transmission occurs
  - Duration of the exposure to TB bacteria

# Concentric Circle

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# Index Case

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- The first person with TB disease who is identified in a particular setting



# Source Case

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- The person or case that was the original source of the infection
  - Two circumstances for source investigation
    - When congregate living setting detects an unexplained cluster of tst conversions
    - When ltbi or tb disease is diagnosed in a young child



# Evaluation of the Index Patient and Possible Sites of Transmission

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- Elements of the patient investigation
  - Pre-interview phase
    - Background information (case report, records, laboratory results, x-rays)
    - Patient characteristics (language, severity of illness, ability to cooperate)
  - Determination of infectious period (preliminary)



# Assigning Priorities to Contacts

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- Occurs after contact investigation decisions
  - Characteristics of the index patient
  - Availability of resources
- Priority/order for investigation of contacts
  - Characteristics of contacts
    - Age, immune status, underlying medical conditions
  - Estimated level of exposure
    - Proximity, duration, volume of space (small room vs. large), ventilation

# Priority For Evaluation Evaluation Of Contacts: AFB smear positive laryngeal/pulmonary/pleural TB

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- **High**
  - **Under age 5**
  - **Medical risk factors**
    - **HIV**
    - **Immunosuppressive agents (steroids, cancer chemotherapy, anti-rejection drugs for organ transplants, tumor necrosis factor alpha agents)**
    - **Other medical risk factors (silicosis, renal disease, diabetes, gastrectomy)**
  - **Exposure during medical procedure (bronchoscopy, autopsy, sputum induction)**
  - **Exposure in congregate setting**



# Priority For Evaluation Of Contacts:

AFB smear positive laryngeal/pulmonary/pleural TB

## ○ Medium

- Aged 5-15
- Exposure exceeds time/space/ventilation limits recommended by state or local TB program

- Estimate of exposure by setting
  - Time at location
  - Size/volume of shared airspace
  - Ventilation – windows, fans
- May be up or downgraded depending on results of testing of higher priority contacts



# Priority For Evaluation Of Contacts:

AFB smear negative laryngeal/pulmonary/pleural TB

- High

- Contacts < age 5
- Medical risk factor
- Exposure during medical procedure

- Medium

- Household
- Exposure in congregate setting
- Exceeds duration/environmental limits



# Priority For Evaluation Of Contacts:

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Suspected pulmonary TB, AFB negative with abnormal chest x-ray not consistent with TB

- High
  - None
- Medium
  - Household
  - Age < 5 years
  - Medical risk factor
  - Exposure during medical procedure



# Tuberculin Skin Testing of Contacts

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- Repeat testing

- Estimated interval between infection and detectible skin test reactivity is 2-12 weeks
- Reinterpretation of data previously collected indicates that 8 week is outer limits of window period.
- CDC & NTCA recommendation that window period be decreased to 8-10 weeks
- VIRGINIA – WINDOW PERIOD DEFINED AS 10 WEEKS FOR VIRGINIA CONTACT INVESTIGATIONS



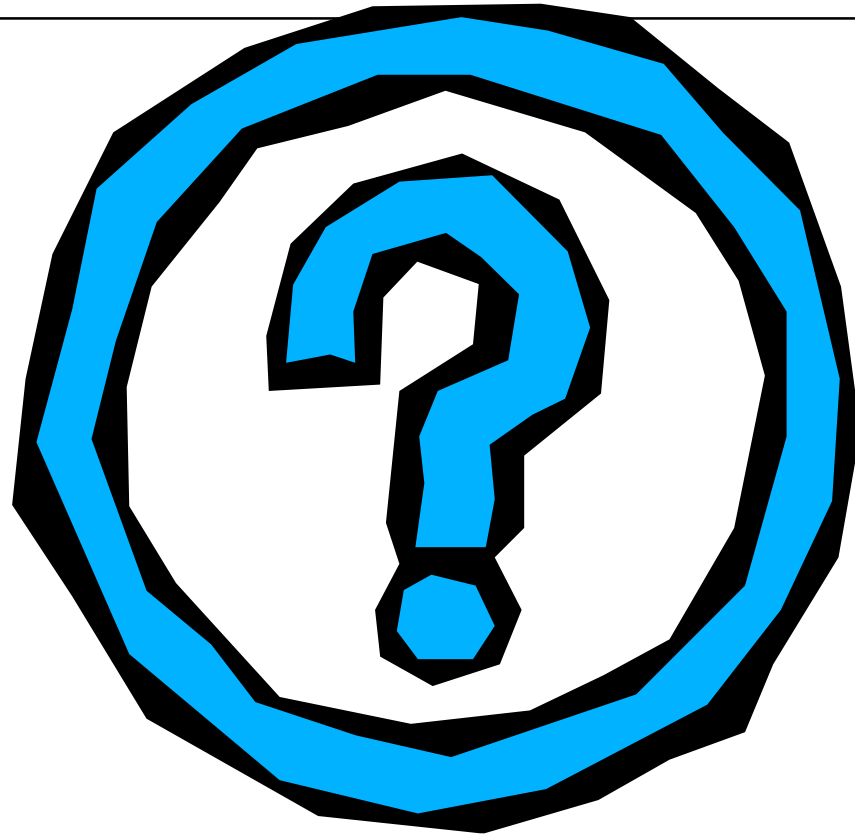
# Required Documents

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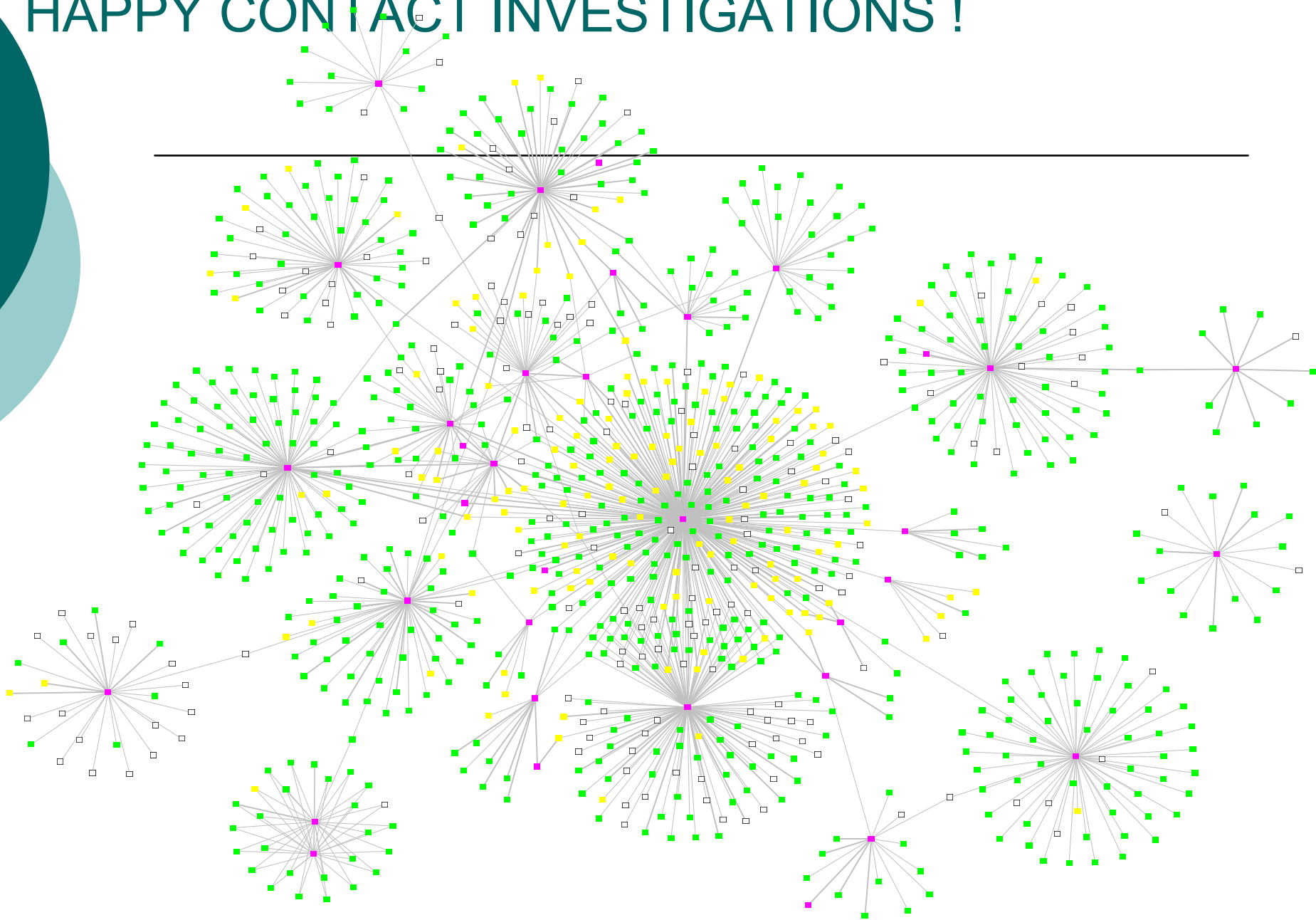
- Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis, December 16, 2005; Volume 54, # RR-15.
- Treatment of Tuberculosis, June 20, 2003; Volume 52, # RR-11.
- Controlling Tuberculosis in the United States, March 2005.
- Targeted Tuberculin Testing and Treatment of Latent Tuberculosis Infection, 2005.

Questions?

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# HAPPY CONTACT INVESTIGATIONS !





# Activity: Case Studies

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